

State of California  
AIR RESOURCES BOARD

**Notice of Public Availability of Modified Text**

**PROPOSED CALIFORNIA GREENHOUSE GAS EMISSIONS STANDARDS FOR  
MEDIUM- AND HEAVY-DUTY ENGINES AND VEHICLES (PHASE 2) AND  
PROPOSED AMENDMENTS TO THE TRACTOR-TRAILER GREENHOUSE GAS  
REGULATION**

Public Hearing Date: February 8, 2018

Public Availability Date: July 3, 2018

Deadline for Public Comment: July 18, 2018

At its February 8, 2018, public hearing, the California Air Resources Board (CARB or Board) approved for adoption the proposed sections 1956.8, 1961.2, 1965, 2036, 2037, 2065, 2112, and 2141, Title 13, California Code of Regulations and sections 95300, 95301, 95302, 95303, 95304, 95305, 95306, 95307, 95311, 95662, and 95663, Title 17, California Code of Regulations, which: 1) establish new, more stringent greenhouse gas (GHG) emission standards that largely align with the federal Phase 2 GHG standards for medium- and heavy-duty engines, vehicles, and trailers; and 2) harmonize the Tractor-Trailer GHG regulation with the Phase 2 trailer standards.

At the hearing, staff presented, and the Board approved for adoption, amendments to the regulatory text developed in response to comments and reflecting staff proposed amendments developed since the Initial Statement of Reasons was released to the public on December 19, 2017. These modifications include: 1) deleting a section from the Note for Authority Cited and Reference of section 1956.8, Title 13; 2) clarifying medium-duty vehicle and heavy-duty vehicle defects warranty language; 3) adding interim requirements for 2018 and 2019 model year trailers; 4) correcting tire rolling resistance measurement units; 5) correcting a footnote reference; 6) deleting a redundant reference to a test procedure; 7) deleting a proposed restriction on advanced technology credit multipliers; 8) adding a model year requirement for engines used in glider vehicles; 9) adding another compliance option for a GHG urban bus certified to the "Other bus" carbon dioxide (CO<sub>2</sub>) emission standard; 10) revising the proposed air conditioning refrigerant leakage reporting requirement; 11) updating a section incorporated by reference to the latest federal amended date; 12) correcting section numbers in the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles;" and 13) making minor clarifications and revisions in the "California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles."

The Board directed the Executive Officer to make the modified regulatory language, and any additional conforming modifications, available for public comment, with any additional supporting documents and information, for a period of at least 15 days as required by Government Code section 11346.8. The Board further directed the Executive Officer to consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days, and present the regulation to the Board for further consideration if warranted, or take final action to adopt the regulation after addressing all appropriate modifications.

The resolution and all other regulatory documents for this rulemaking are available online at the following CARB website:

<https://www.arb.ca.gov/regact/2018/phase2/phase2.htm>

The text of the modified regulatory language is shown in Attachment A to this notice, which shows the proposed 15-day modifications to the "Proposed Regulation Order." Attachment B to this notice shows the proposed 15-day modifications to "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," last amended October 21, 2014. Attachment C to this notice shows the proposed 15-day modifications to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," last amended September 1, 2017. Attachment D to this notice shows the proposed 15-day modifications to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles," last amended September 1, 2017. Attachment E to this notice shows the proposed 15-day modifications to "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," last amended September 2, 2015. Attachment F to this notice shows the proposed 15-day modifications to "California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles." The originally proposed regulatory language is shown in ~~strikethrough~~ to indicate deletions and underline to indicate additions. New deletions and additions to the proposed language that are made public with this notice are shown in ~~double-strikethrough~~ or ~~cross-out~~ in the case of label and double underline format, respectively.

In the Final Statement of Reasons, staff will respond to all comments received on the record during the comment periods. The Administrative Procedure Act requires that staff respond to comments received regarding all noticed changes. Therefore, staff will only address comments received during this 15-day comment period that are responsive to this notice, documents added to the record, or the changes detailed in Attachments A, B, C, D, E, and F.

## **Summary of Proposed Modifications**

The following summary does not include all modifications to correct typographical or grammatical errors, changes in numbering or formatting, nor does it include all of the non-substantive revisions made to improve clarity.

1. Proposed modifications to Title 13, California Code of Regulations are contained in Attachment A to this notice.
  - a. Section 1956.8: Staff is proposing to delete the Health and Safety Code section 43107 from the Note for Authority Cited and Reference. This section 43107, which regulates motorcycles, was incorrectly added in a previous rulemaking to the Note of this Section 1956.8, which sets forth emission standards for heavy-duty engines and vehicles.
  - b. Section 2036(c)(4), (c)(4.1), (c)(8), and (c)(8.1): Staff is proposing to clarify the warranty language containing the term “except medium-duty vehicles,” which excludes vehicles that weigh 8,501 to 14,000 pounds gross vehicle weight rating. Staff is proposing to add the vehicle weight range instead of using the aforementioned term, to provide clarity to its applicability.
2. Proposed modifications to Title 17, California Code of Regulations are contained in Attachment A to this notice.
  - a. Section 95301(b): Staff is proposing to add two trailer types to the list of trailers for which the requirements of the Tractor-Trailer GHG Regulation do not apply. These trailer types, trailers exempt from the standards and certification requirements of Phase 2 and non-aero box van trailers, were previously identified in the definition for a “Phase 2 Certified Trailer.” The change was made to provide clarity as to the applicability of the requirements for exempt and non-aero box van trailers.
  - b. Section 95302(a)(43.2): Staff is proposing to modify the definition of a “Phase 2 Certified Trailer” by identifying October 25, 2016, as the date corresponding to the referenced Code of Federal Regulations section, rather than December 22, 2017. Although the two dates reference the exact same requirements, October 25, 2016, is the date the Federal Phase 2 Regulation was published in the Federal Register and is consistent with similar references for other sections referenced in the Tractor-Trailer GHG Regulation. Further, staff is proposing to remove language addressing how exempt trailers and non-aero box van trailers are excluded from the definition of a Phase 2 certified trailer. Instead, for clarity staff is proposing that these trailer-types be identified in section 95301(b) as trailer-types for which the requirements of the Tractor-Trailer GHG Regulation do not apply.
  - c. Section 95303(b): As included in the public notice that described the regulatory amendments and marked the beginning of the 45-day public

comment period (45-day notice), staff proposed to adopt new trailer GHG emission standards that align with the federal Phase 2 GHG standards. In addition, staff proposed to allow trailer fleet owners the option of complying with the Tractor-Trailer GHG Regulation through the purchase of a Phase 2 certified trailer, or the installation of Phase 2 aerodynamic technologies and low-rolling resistance tires that are components of Phase 2 certified trailer configurations. Due to the federal court stay of the Phase 2 trailer requirements, trailer manufacturers are currently not required to comply with the federal Phase 2 trailer standards. Staff is proposing additional regulation language that would establish interim procedures for the 2018 and 2019 model year trailers. The proposed language would allow CARB to review and approve Phase 2 aerodynamic performance test data that are not being processed by U.S. EPA due to the stay of the federal Phase 2 trailer standards. The interim procedures would only apply to performance data for 2018 and 2019 model year trailers since the California Phase 2 trailer certification procedures would apply to 2020 and later model year trailers.

- d. Section 95303(b)(1)(C) and (b)(2)(C): Staff is proposing to correct the measurement unit of tire rolling resistance by changing it from kilograms per ton to kilograms per tonne in the Tractor-Trailer GHG regulation. The change is to clarify that staff is referring to metric ton unit (tonne), not long ton or short ton units.
- e. Section 95663(a)(2)(B): As part of the original 45-day proposal, staff added a table of Phase 2 emission standards for tractors with a footnote 1 regarding definition of sub-category terms. However, the reference number for the footnote was inadvertently left out of the table. Staff is proposing to add “1” to the “Sub-Category” column of the table to correct this error.
- f. Section 95663(d): As part of the original 45-day notice, staff proposed to add the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles” (LDVTP) to be incorporated by reference in section 95663(d), which contains the test procedures to determine compliance with applicable GHG emissions standards. The aforementioned test procedure was also proposed to be incorporated by reference in the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles.” Staff is proposing to now delete the LDVTP reference from section 95663(d) because the dual reference in both this section and in the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles” is redundant and potentially confusing to the reader.

3. Proposed modifications to “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles” (incorporated by reference in Titles 13 and 17, California Code of Regulations) are contained in Attachment B to this notice.
- a. Sections 86.1819-14(k)(7) and 1037.150(p): As part of the 45-day notice, staff proposed to include a restriction that disallows advanced technology credits for medium- and heavy-duty vehicles that are required by other future California regulatory requirements. Staff has determined through discussions with industry that it is preferable to incorporate such restriction in the context of future regulatory actions that establish emission requirements for advanced technology vehicles (e.g., potentially as part of rulemaking action proposing requirements for Advanced Clean Local Trucks). As a result, staff is proposing to delete the aforementioned restriction in the 45-day proposed regulation language.
  - b. Sections 1037.150(t) and 1037.635(c): As part of the 45-day notice, staff proposed to adopt GHG emission standards for glider vehicles, glider engines, and glider kits that align with the federal Phase 2 GHG requirements, including an exemption of up to 300 gliders per year for small manufacturers that have already been producing gliders. Staff is now proposing as part of this 15-day notice, to require all glider manufacturers, including small manufacturers, to only use 2010 and newer model year engines in gliders certified for sale in California. This proposed change is consistent with the current California Truck and Bus Rule, which requires nearly all diesel-fueled trucks and buses with a gross vehicle weight rating greater than 14,000 pounds operating in California to have 2010 model year engines or equivalent by 2023. Additionally, while the glider requirements are effective beginning January 1, 2017, in the federal Phase 2 program, staff is proposing to establish the applicable date of the California glider requirements to be the same as the effective date of amendment of this rulemaking.
  - c. Sections 1037.241 B.1. and 1037.701 B.1.: Staff is proposing to include an additional compliance option for a GHG urban bus (transit bus) certified to the “Other bus CO<sub>2</sub> emission standard” in order to demonstrate compliance in California and to encourage the introduction of zero emission buses. The proposed additional compliance option would allow transit bus manufacturers who certify their California-sold transit buses with the federal custom chassis standards to produce a certain percentage of their California-sold transit buses with zero-emission buses to show compliance with the California Phase 2 proposal. This option would ensure equivalent emission reductions as if a transit bus manufacturer met the applicable CO<sub>2</sub> emission standard specified in §1037.105(b) but would impose less administrative burden on manufacturers who are already producing zero emission buses.
  - d. Sections 86.1819-14 B.1.2 and 1037.115 B.1.2: As part of the 45-day notice, staff proposed to require the manufacturers to provide air

conditioning system schematics as part of the air conditioning leakage standard certification applications. Staff is sensitive to manufacturers' concerns about certification workload, and recognizes that the workload may be the highest at the beginning of the Phase 2 regulation. For this reason, staff is proposing to provide a three-model year phase-in period for the schematic requirement. Under this proposal, manufacturers would be allowed to provide schematics representing 30% and 60% of the projected California vehicle sales volume for the first and the second model year, respectively. Starting with the third model year under the Phase 2 regulation, manufacturers would be required to provide all the applicable schematics.

- e. Section 1037.115 B: The federal Phase 2 regulation requires manufacturers to use the Society of Automotive Engineers (SAE) standard, J2727, to evaluate air conditioning refrigerant leak rate, as part of the leakage certification. However, for air conditioning systems that have 3,000 grams or more of refrigerant charge and for which SAE J2727 evaluations are impossible or impractical, the federal Phase 2 regulation allows manufacturers to use "alternative means" to demonstrate equivalent refrigerant emission control. As part of the 45-day notice, staff proposed to adopt those federal Phase 2 provisions, thereby allowing alternative leakage evaluation means. Staff is now proposing to require the alternative leakage evaluation means to possess two major characteristics of the SAE J2727 method, so that the leak rates generated using the alternative means would be comparable with those estimated using the SAE J2727 method. Staff is also proposing that the Executive Officer review the evaluation and determine the validity of the alternative leakage evaluation means and the leakage compliance of the system.
- 4. The proposed modification to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," (incorporated by reference in Title 13, California Code of Regulations) is contained in Attachment C to this notice. On April 27, 2018, the Federal Register published a correction to 40 Code of Federal Regulations (CFR) 86.000-7, which amended the introductory language to the section. The aforementioned section is incorporated by reference in these test procedures. In order to reference the most up-to-date CFR section, staff is proposing to update the section date to this latest amended date.
  - 5. The proposed modification to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles," (incorporated by reference in Title 13, California Code of Regulations) is contained in Attachment D to this notice. On April 27, 2018, the Federal Register published a correction to 40 CFR 86.000-7, which amended the introductory language to the section. The aforementioned section is incorporated by reference in these test procedures. In order to reference the most up-to-date

CFR section, staff is proposing to update the section date to this latest amended date.

6. Proposed modifications to “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles” (incorporated by reference in Title 13, California Code of Regulations) are contained in Attachment E to this notice. In the 45-day notice, staff inadvertently mislabeled the numbering of sections 15 through 20, in Part I, Subpart J, by numbering these sections 16 through 21, respectively. Staff is proposing to modify the erroneous numbering to the correct numbering as sections 15 through 20.
7. Proposed modifications to “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles” (incorporated by reference in Title 13, California Code of Regulations) are contained in Attachment F to this notice.
  - a. Section 1: Subsequent to the issuance of the notice, staff identified necessary clarifications regarding implementation of the Environmental Performance label requirement. Staff is proposing to clarify that vehicles manufactured by small business manufacturers get an extra year to meet the requirement to affix an Environmental Performance label; hence such labels would be required for model year 2022 and newer vehicles manufactured by small business manufacturers on or after January 1, 2022. This change is necessary to clarify the implementation date of consumer window label requirements for small business manufacturers, which is consistent with the date small businesses must comply with the Phase 2 regulations. Staff is also proposing to move reference detail, Title 40, CFR, sections 1036.801 and 1037.801, regarding to which medium-duty vehicles the Environmental Performance label applies from “paragraph 1.(a)” to “footnote 1.” This change is necessary for readability.
  - b. Section 2(a): Staff is proposing to modify the existing request for approval language to explicitly include label “format” as one of the items manufacturers must have approval for prior to affixing the Environmental Performance labels to medium-duty vehicles. This modification is necessary to ensure that the consumer window label format on Environmental Performance labels for medium-duty vehicles is correct and consistent with the label specifications.
  - c. Sections 2(b), 2(c), and 4(a): Staff is proposing to clarify that all vehicles within a certain test group and label group (if using label group) will have the same consumer window label. This change is necessary to clarify the implementation of consumer window label requirements.
  - d. Section 4: Staff is proposing to clarify the use of “worst-case” configuration, and include an option to allow manufacturers to split their

test groups into label groups. For example, a manufacturer could split one test group into three label groups. Label group 1: pickup truck with turbocharged engine, label group 2: pickup truck with regular engine, and label group 3: vans. This change would provide vehicle manufacturers the ability to be more specific in how they label their vehicles and would provide vehicle purchasers with a GHG rating more representative of the specific vehicle they are considering.

- e. Sections 4, 5, 6, 9 and Attachment: Staff is proposing to revise the proposed ratings from letter ratings, A to J, to letter grade ratings, A+ to D, and to place the cleaner vehicle (A+ rating) on the left side of the slider bar. This first modification addresses the potential situation wherein consumers do not consider a vehicle because of an apparent failing “F” grade rating on the original A to J scale. The second proposed change, placing the A+ rating on the left side, is necessary to allow vehicle buyers to more easily understand the meaning of the slider bar. Staff is also proposing to change the terminology “best” to “cleaner” to avoid the appearance of a value judgement.
- f. Section 9 and Attachment: Staff is proposing to revise the label format requirements by combining the disclaimers about comparing light-duty labels (U.S. EPA/DOT ratings) to medium-duty labels (CARB ratings). This change is necessary to simplify the label and make it clearer to consumers. Staff is also proposing to revise the statement for vehicles capable of operating on more than one fuel. This revision addresses the scenario in which vehicles have test results showing higher carbon dioxide on flexible- or dual-fuel. Finally, staff added a note on the cover page of Attachment F that a crossed out label indicates the label format that was proposed as part of the 45-day notice is now being revised. This note is added to clearly distinguish the originally proposed label from the label that incorporates the proposed modifications as set forth in this notice of availability of modified text.

- 8. In addition to the modifications described above, additional modifications correcting grammar, punctuation and spelling have been made throughout the proposed changes. These changes are nonsubstantive.

### **Agency Contacts**

Inquiries concerning the substance of the proposed regulation may be directed to Mitzi Magtoto, Air Resources Engineer, Strategic Planning and Development Section, at (916) 323-8975.

### **Public Comments**

Written comments will only be accepted on the modifications identified in this Notice. Comments may be submitted by postal mail or by electronic submittal no later than 5:00 p.m. on the due date to the following:



Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

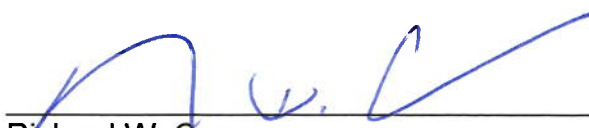
Please note that under the California Public Records Act (Gov. Code § 6250 et seq.), your written and verbal comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

In order to be considered by the Executive Officer, comments must be directed to CARB in one of the two forms described above and received by CARB by 5:00 p.m., on the deadline date for public comment listed at the beginning of this notice. Only comments relating to the above-described modifications to the text of the regulations shall be considered by the Executive Officer.

If you need this document in an alternate format or another language, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 no later than five (5) business days from the release date of this notice. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Si necesita este documento en un formato alternativo u otro idioma, por favor llame a la oficina del Secretario del Consejo de Recursos Atmosféricos al (916) 322-5594 o envíe un fax al (916) 322-3928 no menos de cinco (5) días laborales a partir de la fecha del lanzamiento de este aviso. Para el Servicio Telefónico de California para Personas con Problemas Auditivos, ó de teléfonos TDD pueden marcar al 711.

CALIFORNIA AIR RESOURCES BOARD

  
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Richard W. Corey  
Executive Officer

Date: *July 3, 2018*

Attachments

*The energy challenge facing California is real. Every Californian needs to take immediate action to*

*reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see CARB's website at [www.CARB.ca.gov](http://www.CARB.ca.gov).*